Periscope.

PHYSIOLOGICAL.

The Mutual Relation Between Anæsthesia and Sensory Anæsthesia.—Bechterew. (*Neurolog. Centralblatt*, 1894.) The clinical experience that disturbances of vision in the sense of optical hypæsthesia was frequently combined with anæsthesia of the eye, and that in such cases the impairment of vision was not hemianopic but strictly unilateral, i. e , confined to the anæsthetic eye, induced B. to study experimentally the relationship which exists between the sensory (for instance, optic anæsthesia, blindness, amblyopia) and the common anæsthesias of the corresponding organ of sense (anæsthesia of the eye to touch, pain, temperature, etc.)

For this purpose he performed section of the right ascending root of the nerve in the *med. oblong*. of a rabbit. Simultaneous lesion of the optic paths, which might have occurred if the third nerve had been operated upon in its peripheric course was then avoided. The effect was anæsthesia of the right side of the face, including the right eye. At the same time amblyopia of the right eye was observed. To what degree the vision was impaired and how it was manifested he does not state.

To explain the result of the experiment, B. calls attention to the clinical experience that cutaneous anæsthesia is frequently accompanied with contraction of the blood vessels, and consequently with ischæmia of the anæsthetic district, and that *vice versa* in ischæmic districts sensation is diminished. He concludes that the anæsthesia causes contraction of the blood vessels, and thereby disturbances of nutrition, and *vice versa*. Applied to the optic functions this means that the "usual" anæsthesia (anæsthesia of the eye to touch, pain, etc.) would lead to contraction of the blood vessels, and therefore to disturbances of nutrition of the parts intimately related to the function of vision (retina, optic nerve, etc.) The anæsthesia would also, by way of reflex, impair the action of the ciliary muscle, by which the visual functions would be still more diminished. Common anæsthesia of the organ of hearing would impair the auditory functions in an equal manner. (The functions of the stapedius muscle would be impaired by anæsthesia of the drum.) As the olfactory and gustatory functions are combined for specific and common sensation, the common anæsthesia would for this reason still more impair the sense of smell or taste respectively. ONUF (ONUFROWICZ).

Parts That Do Not Grow Old. (*Medical Record*, January 19, 1895.) Dr. Balfour says that the brain, if wisely used, largely escapes senile failure. Persons who think have often wondered why brain workers, great statesmen and others should continue to work with almost unimpaired mental activity and energy up to a period when most of the organs and functions of the body are in a condition of advanced senile decay. The reason is that the normal brain remains vigorous to the last, and its nutrition is especially provided for. About middle life, or a little later, the general arteries of the body begin to lose their elasticity and to slowly but surely dilate. They become, therefore, much less efficient carriers of the nutrient blood to the capillary areas. But this is not the case with the internal carotids, which supply the capillary areas of the brain. On the contrary, they continue to retain their elasticity, so that the blood-pressure remains normally higher than within the capillary area of any other organ in the body. The cerebral blood paths being thus kept open the brain tissue is better nourished than the others. FREEMAN.

Galvanization of the Brain.—J. F. Herrick, M.D. (*N. Y. Med. Jour.*, September 15, 1894.) Dr. H. A. Hare has stated that it is impossible to pass a current of electricity, such as is usually applied to the head, through the brain by means of electrodes applied to the cutaneous surface of the head, because the current follows the course offering the least resistance, and with the electrodes applied to opposite sides, that the course is through the skin and soft parts external to the cranium Dr. Herrick denies this, and says that from experiments made by himself to determine the resistance offered by bone as compared with other tissues (fresh beef, fat and fibrous tissue), muscle is the best conductor, and by far the poorest is fat and fibrous tissue. As the scalp is composed mostly of fibrous tissue and fat, we should expect to find it very resistant It is alleged that in the percutaneous application of electricity the epidermis offers 300 times the resistance that all the intervening tissues do, and that the more succulent tissues offer the least resistance; therefore the brain would be among the best conducting tissues of the body. Dr. Herrick says the thickness of both sides of the skull together is little more than half an inch, and this with, say, seven inches of less resisting brain tissue, cannot offer a greater total resistance than about ten inches of skin and fascia through which the current must pass in going around the cranium. From experiments which he made to determine whether the current passed through the brain or not, it would certainly appear that electric currents may and do pass through the brain when an electrode is applied to either side of the head.

FREEMAN.

PATHOLOGICAL,

Contributions to Muscular Pathology.—Fr. Schultze (*Deutsche Zeitschrift. f. Nervenheilkunde.*, Vol. vi., Parts I. and II.) Myokymie (muscular waving, especially in the lower extremities).

A healthy farmer, without hereditary taint, has been always well, excepting slight occasional attacks of headaches and diarrhœa. Following a physical overexertion the patient had to give up his work on account of painful spasms, tremor and tired feeling in the muscles of the lower extremities. On examination the somewhat voluminous muscles are in constant waving. Passive movements are accompanied by painful clonic contractions of the muscles of the calves and adductors of the thighs. Similar phenomena occur, though far less frequent, in the other muscles of the body. Occasionally, fibrillary twitchings can be noticed. Constant hyperidrosis of the lower extremities, even when naked, at a temperature of 16° R. The electrical examination of the gastrocnemius shows a tetanic contraction at a very weak current; otherwise the electrical reactions quite normal. The patient recovered under rest and the use of the prolonged warm bath.

Looking for analogies in the literature, the author finds similar cases reported by Talma in his paper, "Myotonia Acquisita," and by Kny in an article published in vol. xix., *Arch. f. Psych. u Nervenkrankheiten*: "Ueber cin dem Paramyoclonus (Friedreich) nahestehendes Krankheitsbild."

The cases of Talma show some analogy to the muscular cramps occurring in cholera morbus and Asiatica, because two of the cases had suffered from diarrhœa.